

## ABSTRACT OF THE DISCLOSURE

A reference image and an inspection image indicating pattern on a substrate are acquired and a specified pixel value range (63) is set on the basis of a histogram (62a) of pixel values of the reference image. Then, a transfer curve (71) having a large inclination in the specified pixel value range (63) is obtained. The inspection image and the reference image are converted in accordance with an LUT having transfer characteristics indicated by the transfer curve (71), an enhanced differential image between a converted inspection image and a converted reference image is generated and each pixel value of the enhanced differential image is compared with a predetermined threshold value, to thereby perform a detection of defective pixel. With this, a value of pixel in the enhanced differential image which corresponds to a pixel in the reference image (or inspection image) having the pixel value in the specified pixel value range (63) is enhanced, and appropriate inspection is thereby performed.